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10/581,951	08/25/2006	Beat Schilling	CU-4849 RJS	7391

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EXAMINER
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LARKIN, DANIEL SEAN

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/581,951  
Filing Date: August 25, 2006  
Appellant(s): SCHILLING ET AL.

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Zareefa Flener  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 13 December 2010 appealing from  
the Office action mailed 06 January 2010

**(1) Real Party in Interest**

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

## **(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

## **(3) Status of Claims**

The following is a list of claims that are rejected and pending in the application:

Claims 1-3 stand rejected.

## **(4) Status of Amendments After Final**

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

## **(6) Grounds of Rejection to be Reviewed on Appeal**

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

### **(7) Claims Appendix**

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

### **(8) Evidence Relied Upon**

WO 03/019149	Abdel-Rehim	03-2003
5,064,418	Cronin	11-1991
JP 10-10104	Takii et al.	01-1998
4,849,179	Reinhardt et al.	07-1989

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 03/019149 (Abdel-Rehim) in view of US 5,064,418 (Cronin).

With respect to the limitations of claim 1, Abdel-Rehim discloses a method and apparatus for sample preparation using solid phase microextraction (SPME), comprising the steps of: providing a syringe (2) and hollow needle (8); drawing a sample for extraction and introduction into a gas chromatograph, whereby for extraction of an

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analyte of interest, the sample is flushed through a stationary material (10, 11). Abdel-Rehim fails to expressly disclose that the sample extracted is a gaseous sample; however, the examiner argues that the device utilized in Abdel-Rehim is capable of being used with a gaseous sample because SPME can be used with both liquid and gaseous samples. Abdel-Rehim also fails to locate the stationary phase between the hollow needle and the syringe.

Cronin discloses an apparatus utilizing filter means for use with a syringe and needle, whereby the apparatus, comprises a hollow needle (12) connected to a syringe (10), wherein in between the needle (12) and the syringe(10), a chamber (18)/filter (11) is located containing a filter material (23) within. The filter material also appears to have a volume greater than the volume of the hollow needle (12). Modifying the syringe of Abdel-Rehim with the arrangement of Cronin would have been obvious to one of ordinary skill in the art as means increasing the surface area of the SPME material, which allows for more material to be adsorbed onto the material, without having to increase the size of the syringe. Additionally, use of an elongated tubular body containing adsorbing/filtering material would further be obvious to one of ordinary skill in the art because this feature allows an operator to change adsorbing/filtering material quickly without having to take apart the syringe and handle the adsorbing/filtering material; thus increasing the sampling rate as well as minimizing contamination of the material or the sampled substance contained on the material.

As to the limitation of providing a stationary phase material having a volume greater than the interior of the needle, the examiner argues that this feature is well

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within the purview of one of ordinary skill in the art as means of controlling the amount of sample to be contained within the stationary material, and furthermore adjusting the size of the stationary material to find the optimum result is also deemed to be obvious to one of ordinary skill in the art. Appellant has failed to provide any argument of criticality for providing stationary material having a volume greater than the interior volume of the needle. The courts have ruled that changing the size of article, absent some teaching of criticality, is not ordinarily a matter of invention. *In re Yount*, 36 C.C.P.A. (Patents) 775, 171 F.2d 317, 80 USPQ 141.

With respect to the limitation of claim 2, Abdel-Rehim discloses a syringe (2) and a hollow needle (8) connected to the syringe body (2) wherein, the syringe body contains an extraction material (11), which may comprise filter material having a coating. Abdel-Rehim fails to expressly provide a chamber between the needle and the syringe.

Cronin discloses an apparatus utilizing filter means for use with a syringe and needle, whereby the apparatus, comprises a hollow needle (12) connected to a syringe (10), wherein in between the needle (12) and the syringe(10), a chamber (18)/filter (11) is located containing a filter material (23) within. The filter material also appears to have a volume greater than the volume of the hollow needle (12). Modifying the syringe of Abdel-Rehim with the arrangement of Cronin would have been obvious to one of ordinary skill in the art as means increasing the surface area of the SPME material, which allows for more material to be adsorbed onto the material, without having to

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increase the size of the syringe. Additionally, use of an elongated tubular body containing adsorbing/filtering material would further be obvious to one of ordinary skill in the art because this feature allows an operator to change adsorbing/filtering material quickly without having to take apart the syringe and handle the adsorbing/filtering material; thus increasing the sampling rate as well as minimizing contamination of the material or the sampled substance contained on the material.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 03/019149 (Abdel-Rehim) in view of US 5,064,418 (Cronin) as applied to claim 2 above, and further in view of JP 10-10104 (Takii et al.).

Abdel-Rehim discloses using a solvent to transport the collected sample to the chromatograph; but, fails to disclose heating means attached to the chamber. Cronin also fails to disclose use of heating means.

Takii et al. disclose a syringe measuring device used to inject a sample into a gas chromatograph, whereby the device is provided with a syringe (20) having a hollow needle (42) attached. The syringe is placed within a case (12) that acts as a heater for the syringe, see Figures 1, 3, and 5. Providing a heater for the syringe/chamber would have been obvious to one of ordinary skill in the chromatography art as a means of desorbing the sample from the stationary/extraction material in order for the gas chromatograph to detect the sample.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 03/019149 (Abdel-Rehim) in view of US 5,064,418 (Cronin) as applied to claim 2 above, and further in view of US 4,849,179 (Reinhardt et al.).

Abdel-Rehim discloses using a solvent to transport the collected sample to the chromatograph; but, fails to disclose heating means attached to the chamber. Cronin also fails to disclose use of heating means.

Reinhardt et al. teach the use of a thermal desorption heater (9) in an injector for a gas chromatograph; see abstract and Figure 2. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a heater as taught by Reinhardt et al. in the combination taught by Abdel-Rehim in view of Cronin to desorb the sample, since Reinhardt et al. teach the use of a heater surrounding the extraction material for desorption to assist in transferring trace amounts of absorbed substances into a gas chromatograph; see columns 1-2.

#### **(10) Response to Argument**

With respect to Appellant's argument that one of ordinary skill in the art would not intentionally consider taking a step backward against the direction of development taught by Abdel-Rehim, the examiner respectfully disagrees that the combination is a step backwards. The combination of Abdul-Rehim in view of Cronin is different solution than the "needle trap" devices Appellant and Abdul-Rehim speak of. First, in the needle trap solution, the trapping agent, i.e. a coated fiber, is placed within a needle, which is subject to being easily damaged because of the placement of the fiber in a small area.



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Abdul-Rehim teaches placement of the trapping material into the syringe body. Cronin teaches placement of the trapping material in a tube attached to the syringe, which allows for larger trapping materials to be utilized. The combination allows for a larger trapping material to be utilized, wherein the trapping material can be more easily handled and contained without damaging or contaminating the material. Thus, it is the examiner's opinion that the combination of Abdul-Rehim in view of Cronin is very different from the "needle trap" solution.

With respect to Appellant's argument that using a larger trapping material is absurd, the examiner respectfully disagrees. First, by increasing the surface area of the trapping material more substance can be gathered by the material. Additionally, the solution is not to increase the size of the syringe, as Appellant argues because the syringe eventually becomes too big to comfortably handle. By providing the intermediate tube as taught by Cronin, one can increase the surface area of the trapping material, thus increasing the amount of substances adsorbed onto the material. Additionally, the intermediate tube can be quickly and cleanly detached from the syringe body, rather than taking the syringe apart and removing the material from the syringe, which is more time consuming and more prone to contamination.

With respect to Appellant's argument that Cronin is not related to solid phase extraction, the examiner agrees. Cronin was used to teach that placement of a trapping material in a tube between a needle and syringe is well known in the art. The use of a solid phase extraction material is taught by Abdul-Rehim.

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With respect to Appellant's argument that Abdul-Rehim cannot be used with gas chromatographs, the examiner respectfully points to page 4, lines 19, which clearly suggests that the invention of Abdul-Rehim can be applied to both gas chromatography and liquid chromatography.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Daniel S. Larkin

/Daniel S. Larkin/

Conferees:

/HEZRON E WILLIAMS/

Supervisory Patent Examiner, Art Unit 2856

/Darren Schuberg/

TQAS TC 2800